

PROJECT TITLE : AGRICULTURAL CHEMICALS
PERIOD COVERED : OCTOBER 1980
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ROUTINE ANALYSIS

Number of samples analysed for pesticide residues in October :

Organochlorines	46
Organophosphorus	46
Organophosphorus + Methamidophos	10
Dithiocarbamate	29
Maleic Hydrazide	24

MH - 30

The bi-monthly (June / July) check of PM brands produced in Munich, Serrieres, Holland, Austria, London, Weltab and Eindhoven (1) showed MH - 30 residue levels ranging from 26 to 56 ppm.

Marlboro basic blended strips destined for Austria, Italy, Finland, Yugoslavia, Poland and Greece and FOCI destined for Spain and the Canary Islands have been analysed for MH - 30. Residues found are between 40 - 60 ppm. Exceptions are FOCI / Spain with 75 ppm and Marlboro / Finland with 70 ppm MH - 30 (2).

NEW ANALYTICAL METHODS

Maleic Hydrazide

The reaction product of maleic hydrazide with dimethyl-sulfate has been identified as 1 - methyl - 3 - methoxy - 6 - pyridazinone (1) (3). The synthesis of 1 on a 20 µg to 5 g maleic hydrazide basis gives the compound in 40 - 50% yield. The efficiency of extraction of 1 with

dichloromethane from aqueous solution was found to be 98%.

By applying N,N - dimethylformamide dimethylacetal (DMF - DMA) as methylation reagent 1 was obtained in 80 - 90% yield. The methylation of maleic hydrazide on tobacco with DMF - DMA is presently being investigated.

Ridomil (Metalaxyl)

In a joint experiment initiated by the CORESTA Pesticide Sub-Group the methods developed at INBIFO, Forchheim and Ciba-Geigy are being compared. Both the methods of Ciba-Geigy and of Forchheim include more steps than the INBIFO method and the quantity of solvents needed is much larger.

The methods of INBIFO and Ciba-Geigy give approximately the same Ridomil values. (Table 1).

Table 1

Method	RIDOMIL (ppm)			
	Sample 1	Mean	Sample 2	Mean
INBIFO	2.18	2.20	3.96	3.99
	2.22		4.02	
Forchheim	1.25	1.23	1.40	1.55
	1.20		1.70	
Ciba-Geigy	2.42	2.27	3.57	3.59
	2.11		3.61	

REFERENCES

- 1) M. Speck, PME Research Laboratory, Monthly Progress Report July 1980.
- 2) Memo from F. Moser to G.S. Osmalov, October 29, 1980.
- 3) E. Lecoultre, PME Research Laboratory, Monthly Progress Report September 1980.

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